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THE CROWN OF LIFE.

THERE is very little unanimity of opinion anywhere, and 'so many men, so many minds,' is a time-honoured saw which incloses more truth than always belongs to these concrete crystals of thought called proverbs. But about nothing is there less unanimity than about the highest meaning of life, and what is the best thing to strive for, the sweetest thing to cherish. With some it is love; with others it is success; with a few it is religion; and with even fewer still it is abstract duty—duty irrespective of personal reward here or hereafter; duty apart from the praise of men, and without the hope of gain; duty because of the sacred obligations lying in itself alone; duty because it is duty!

It is a favourite saying with the emotional and feeble-minded that duty is cold, and that love alone gives warmth and life to action; that doing one's duty, however thoroughly, carries no sense of healing with it, leaves behind it no sense of blessing. In which is the same kind of mistake as has been so often made between justice and legality; for the duty which these objectors mean is merely the mechanical performance of so much practical obligation, and the duty which we mean, and which alone is worthy of discussion, is that which involves the sacrifice of self for the sake of conscience, the love of the soul for virtue rather than the love of the heart for love.

There are people who make the very name of doing one's duty odious, because it is all a lifeless mockery of the real thing, without truth and without meaning. The cold unloving woman who fulfils to the letter every required condition of her marriage-tie; who keeps her husband's house in respectability and outside comfort—but as his house rather than her own, or maybe as hers rather than his, anyway not as a joint home, where both have rights, and both find joy; who balances her books with accuracy, and does not fill his rooms with undesirable guests; who takes sufficient care of his money and his comforts alike, and neither sends him in milliner's bills which he cannot pay,

nor puts before him a dinner which he cannot eat; who does not defy him when he forbids, nor refuse when he requests; but who contrives, with all this apparent dutifulness, to make his life a burden to him, and his marriage a misfortune—is she one who can be said to lead a life of duty in the higher sense, whatever she may do in the way of fulfilling her obligations with what we may call mechanical correctness? Does the dull automatic performance of a few routine duties (we want two words for the different things included now in one) constitute the grand life known as conscientiousness, self-sacrifice, love of right?—all of which virtues are gathered together in that one word, Duty. Surely not! This is legality in the place of justice, obligations painfully discharged, not duty nobly accepted and loyally performed.

So, the man who 'does his duty by his family'—but the bare bones of his duty only, giving nothing beyond what the law and public opinion force him to give—cannot be said to live for that kind of duty of which God demands the strict fulfilment, if we are to find favour in His eyes. He gives his wife money enough to keep the house, but he gives her nothing of his care, none of his thoughts, his sympathies, his tenderness. Let her be happy or unhappy, it is all one to him. He has done his duty by her in the way of a liberal allowance for housekeeping, and pocket-money for herself; in the way of freedom of action, and that form of indifference called liberty, which does not care even to chide and never to direct; he has done his duty by her, he says; for the rest—who can blame him? He sends his sons to school, and then to college, or puts them into the business that offers itself; but he gives them no advice, never makes himself their friend, and simply feeds and educates them, as the obligation laid on him by society and the law, supplementing nothing of this obligation by grace given voluntarily and striking to the deeper root of things. If he had a true sense of duty, he would know that this was simply keeping the promise to the ear, while denying it to the heart

and to truth; and that human life demands more than bare bones for its sustenance, however accurately these may be arranged and labelled. Indeed this kind of thing is not duty at all, any more than mechanism is life. But just as the ignorant savage believes that a watch lives, and that the ticking of its wheels is the beating of its heart, so does the untaught conscience accept obligations discharged as duties fulfilled, and make itself happy in the conviction that it is above reproach and beyond the need of amendment.

Nothing strikes one so much in the history of the ancient Greeks and Romans as their glorious sense of duty. The duty of the citizen to his country was the first and holiest law laid on each man's soul. For that country he must be prepared to sacrifice family and goods, and life itself when the need came, without any of that fond looking back by which the resolution of even the heroic is weakened, and the spirit of brave men subdued by their emotions. It was his duty. The world contained nothing greater or more compelling than this word; and what discipline is to modern life, this was to the ancient—only that, being more individual in its action than discipline, the duty of the ancient hero had a certain largeness and picturesqueness wanting in general to this other. And yet, when we remember the Balaclava charge and the wreck of the *Birkenhead*, we cannot say that discipline fails in picturesqueness; or that masses of men, moved to simultaneous action by the law of obedience, are not as glorious as individuals voluntarily sacrificing themselves for the sentiment of duty—that unspoken law which ruled the public life of men as it has never been ruled before or since. Each method has its grandeur, its beauty, and each has its fitting time. To the smaller communities belongs the prominence of individual qualities, individual action; to the larger, the submission to authority, to law, to organised command. But we can never forget what we owe to the ancients, as we familiarly call them; nor how the history of humanity has been enriched and ennobled for all time by the pictures left to us of the men who went to destruction for the sake of their country, of the women who devoted themselves to death that by their sacrifice they might appease the anger of the gods and free their land from the curse—all in the name and for the sake of abstract unrewarded and impersonal duty.

So far as this goes indeed, the annals of every race and time and country teem with records of brave men and noble women who have given themselves for their kind, preferring the hard things of duty to the soft ones of selfishness, and loving the right better than pleasure. No passion has roused men to a grander life of heroism, or led them to a nobler death, than the love of country, and its twin-sister, the love of liberty. From Leonidas to Wallace—and both before and after—we see what can be done under the influence of this great love, this duty which is synonymous

with love; and the sacred fire is not yet burnt out. If need be, and when the need is, the flame shoots up anew; and even the most miserable war gets itself hallowed by the splendid sacrifices that are made in it, and the magnificent virtues that it brings forth. Dull and dim as the sentiment of public duty becomes in the piping times of peace, when domestic liberties are not threatened, nor the honour of the country assailed, nor its national existence in peril—when a man's highest civic functions are to serve on a jury, attend the vestry meetings, and perhaps be elected guardian of the poor, or one of the School Board—there is no question that, if the scene changed and the country demanded sacrifice, there would be thousands of volunteers for the pathetic honour of martyrdom; thousands of brave hearts ready to give themselves for the cause, and to do their duty to the death without bemoaning or remonstrance.

The race of heroes never dies out, but the dress of heroism changes according to the circumstances of the time. Now it is Leonidas at Thermopylæ, and now it is Galileo in prison; now the poor Jew in Spain crying out from amidst the flames of the auto da fé, 'The God of Israel, He is the only God;' now the poor Catholic in England making the sign of the cross and praying to the saints and the Holy Mother when bound to the stake at Smithfield as the best way to cure his errors; or it is the Covenanter shot down like a malefactor in his house for reading the Bible, which was more to him than life; or the Socinian tortured and burnt with anathemas as if he were a dog; or it is Joan of Arc roused from her sleep by a Voice bidding her deliver France; or a few comparatively obscure men passing years of their lives in prison not so very long ago, that the 'taxes on knowledge' might be done away with, and the press made cheap that the people might learn to be free. Sometimes in one form and sometimes in another, but always present among men is this noble spirit of duty, this glorious acknowledgment of a life higher than the life of self, and greater than the joys of sense. Without it, indeed, we should never have come to where we stand to-day; and though our plan is infinitely below our ideal, and less than our possibilities, still, seeing that we have gained what good we have by striving after it, mainly actuated by the law of duty, we may take heart for the future and confess our gratitude to the past.

We have nothing better as a rule of action than the law of duty; but it must be wisely directed and generously planned. We know that this law by itself, without this wisdom, this generosity, can be translated into cruelty and fanaticism of the worst kind—as witness the fearful religious and political persecutions that have taken place, and that still take place, with more or less rancour in the persecutors, and more or less suffering to the persecuted, as the law and public opinion may forbid or allow. But it is not to be supposed that men, as a rule, liked the task of harrying and burning those who differed from them in opinion.

A few unnatural monsters, half-mad and wholly callous, might have felt a fiendish kind of pleasure in witnessing pain and adding torture to torture. We have always had these semi-maniacs, these moral madmen, in the world, and we suppose we always shall; but they are the exceptions, even among the ordainers of cruelties and oppressions. The actuating motive was the sense of duty. It was their duty—so even the inquisitors taught themselves to believe—to stamp out this and that dangerous heresy from the world; and they took the best means known to them. Open and fair controversy, public discussion of differences in views and opinions, was not a method in vogue in those days, and would have been thought high treason to the majesty of truth had it been allowed. 'So many men, so many minds,' was a doctrine of shameful laxity, of consenting with sinners, and by no means to be sanctioned by the guardians of the majesty of truth. Hence the only thing remaining was to kill the bodies of those whose minds were evil, that they should not corrupt the innocent nor mislead the virtuous by their debased thoughts. It was their idea of duty to them, the inquisitors and law-makers; if also duty in their poor victims to still testify, whatever the consequences, and to prefer torture and death to recantation and life. And what we have seen in the world's history we might see again, if the current of conscientiousness set that way, and illiberality to men was again considered the highest expression of fidelity to God.

This narrowness and illiberality, this fanaticism and perfect satisfaction with one's own ideas on things, are just the dangers of very dutiful people. What they think they ought to do, that they do, without the smallest reference to the feelings, the right of free opinion, or the need of free action in others. Those rights indeed, if connected with opinions pronounced to be wrong by the fanatics, are as accused as was ever Judaism in Spain, Mohammedanism to all Christendom, Protestantism under Mary, and Papistry under Elizabeth. Still the desire to regulate the souls of others according to the laws by which we regulate our own, dominates those of us who are earnest and faithful, lovers of the right and aspirers after good. We cannot concede the liberty of difference of opinion when we believe that we hold the truth, the very truth—for what second reading can there be to truth? what difference of opinion on the supremacy of the absolute? We think it our duty to argue and protest; to suppress if we can, to deny always, such things as we hold to be errors. It may be unpleasant to the hearer and an effort to ourselves; but it is our duty, we say, and that word clamps the most shaky will into serviceable stiffness. Thus, we sometimes say that it is our duty to remonstrate with our friends for their shortcomings here and their wrong-doings there—to tell our mind to A. anent his habits, how the turf will be his ruin, and cards his destruction; to inform B. that, to our view of things, his business is badly managed, and his family ill-conducted; and so on. 'It is our duty,' we say, and we must neither fear nor avoid the most disagreeable results of this powerful watchword. But there are limits even to virtues, and the practical exercise of our idea of duty has its boundaries like the rest. It is rarely our duty to be aggressive; and putting all the world to rights may be overdone, however sincere our intention.

These are the slips made by zeal when more warm than wise, the weak points of action in a strong faith. Nevertheless, for all the mistakes that have been made, and are still daily made in the name of duty, it is the noblest thing for which to live; it is the truest compass by which to steer our course; the best guide; the most faithful counsellor; the fairest jewel to be worn on our breast; the golden chain about our feet binding us to good, keeping us back from following evil; the lamp that illumines us in the dark hours of the soul, the distracted moments of the mind's doubt; the throne whereon we rule Ourselves; and the imperishable Crown of Life.

FALLEN FORTUNES.

CHAPTER XXX.—MR HOLT DEPARTS WITH FLYING COLOURS.

HOLT did not know the precise moment at which Mrs Dalton had quitted him; a mist seemed to come over his eyes at her last words, and the next sound he had any clear cognisance of was a subdued clatter of forks and dishes. He was standing with his face to the mantelpiece, on which rested his elbows, and with his back to the table, from which the servants were removing the luncheon things. He knew not how long he had been in his present position, or how he had assumed it. He was perfectly aware, however, of what had happened: that he had proposed for Kate to her mother, and that that lady had referred him to her husband—in other words, had rejected him. He had good reasons of his own for knowing that if Dalton was to be asked the same question the answer would be a very unmistakable 'No.' To be sure there was still Kate herself, to whom he had not been absolutely forbidden to apply; but that was an experiment from which he shrank; a last hope, to which he must be hard driven indeed before he resorted to it; for he felt her answer would be final. The present, as her mother had said, was an inopportune time to speak to her, and, what concerned him more, it was an unfavourable time. 'You have only to wait,' Mrs Campden had said, or as much as said, 'until she begins to feel the discomforts of poverty, and then your chance will be improved.' Indeed, she thought it a certainty. But could he wait? There was the rub. Could he afford to wait? Being now alone, he drew his pocket-book out, and from it a slip concerning some shipping intelligence, on which he pondered with anxious care. 'The quickest ship on the line,' he murmured; 'curse him!' Then he studied the almanac. 'There is not a day to lose; there is not an hour. The pursuit is madness; I will give her up.'

As he said so, the soft crunch of gravel came from the sweep without, and an open carriage drove by the window: the three girls had come home from Sanbeck. He caught a glance of Kate, as she looked up with a cheerful smile towards her mother's room; her sun-bright hair, her pale expressive features, and her gentle reassuring eyes, made up a picture exceedingly beautiful; it passed in a moment, as though an angel had looked out from heaven, and then withdrawn herself into the impenetrable blue. But he knew that it was reality, and that his adored one was at the hall-door, within a few feet of him. He did not stir,

however, but stood as if spell-bound, listening to the ring at the bell, the footman letting down the steps, and all the usual sounds of arrival. These died away, and were presently succeeded by other sounds: a thumping of some object on the encaustic tiles that composed the floor of the hall; a rapid flutter of female garments, and some hurried talk. Then the door opened, and revealed Mr Geoffrey Derwent with a carpet-bag in one hand, and dragging a huge portmanteau with the other; behind him came Kate Dalton, entreating, commanding, cajoling. Her colour, already high, rose at the sight of Holt.

'I did not know you were here, Mr Holt,' said she eagerly; 'but I am glad of it. Do speak to Jeff. Something has happened between him and Mrs Campden—I don't know what—and he is quitting the house in this fashion.'

'I don't want Mr Holt's opinion upon the subject,' said Jeff vehemently; 'nor any man's opinion. I will not stay another night under this roof.'

'But why carry all that luggage about with you, Mr Derwent?' asked Holt, smiling.

'Because I don't wish to be indebted to any one belonging to Mrs Campden for the smallest service. I shall leave them here, behind the door; and go myself to Bleabarrow for the fly, which will take them away.'

'And then?' inquired Mr Holt with an amused air.

'Yes, indeed; that is what I have been telling him, Mr Holt,' broke in Kate earnestly. 'What is he to do in London, without money, without friends? He will starve to death.'

'He will have to apply for outdoor relief, at all events,' said Mr Holt in corroboration.

'What is that to you?—that is my look-out,' answered Jeff, turning fiercely upon the last speaker. 'You heard what that woman said to me at lunch: would you not think it better to starve than to stay here, if she had spoken so to you?'

'I should certainly not have staid here, in that case,' said Mr Holt quietly.

'There, you hear him!' cried Jeff triumphantly; 'even Mr Holt would not have staid.'

'Pray, do not encourage Jeff in his obstinacy,' pleaded Kate, with tear-dimmed eyes. 'You know the world, and should give him better advice.'

'My advice, Miss Dalton, is, that he should go at once,' answered Holt coolly—'and with me. Your mother and I were talking the matter over; and we agreed, if Mr Derwent himself approved of the plan, that I should take him into my office upon trial: after a month or two, he would be able to judge if stockbroking suited him.'

'Oh, Mr Holt, how good of you! Is this really true?' ejaculated Kate.

'I don't understand,' hesitated Jeff; 'of course it is most kind of Mr Holt; but—'

'Well, just run up to Mrs Dalton, my lad; it was she who proposed the matter, and who will be therefore in the best position to explain it to you. I suppose you would have wished her good-bye in any case.'

Jeff coloured and hung his head; his indignation had indeed been such as to induce him to leave Riverside without bidding farewell to anybody. 'Yes, I will do that,' he said, after a little

hesitation, due, doubtless, to the fear of meeting his hostess upon the way—not that he was afraid of her, but of himself.

Thus, by a most unlooked-for accident, Mr Holt found himself alone with Kate. He was by far the more embarrassed of the two, and shewed it by his silence; he that had been so glib in the presence of a third person had now not a word to say for himself. Kate, on the contrary, poured forth sentence after sentence, without much thought of anything except that she must not give her companion the opportunity of saying anything to her save in the way of reply.

It was 'so kind' in him, 'so thoughtful,' and 'so opportune' to think of taking Jeff into his employment; she was sure he would find him 'so intelligent' and 'so nice.'

'To tell you the truth, Miss Dalton,' said Holt frankly, 'I don't much care how the young gentleman suits me, though I shall do my best to make things suit him.'

'That is still more kind of you,' answered she, 'for Jeff has no friends, except Mr Campden and ourselves, who are, alas, powerless to help him.'

'Nay, Miss Dalton, don't say so: you are all-powerful. Your wish, at all events, is *my* law in this matter—and indeed in all matters, if you would only let me serve you.'

'You are very good, I'm sure.'

He remembered that those were the very words her father had used, and the very tone, when he had declined his assistance.

'I am not at all good, Miss Dalton,' answered he bitterly; 'except in so far as I am devoted to your interests. Should the time come to prove it, pray remember that.'

She had grown suddenly very pale, and was listening eagerly, not to him, but for Jeff's return. As his quick step was heard in the hall, the girl drew a sigh of relief. Holt perceived all this; but still he had spoken to her in a significant, if not a tender fashion, and had not been rebuked. He felt another man, and a far happier one than he had felt an hour ago. A gleam of hope illumined the dark path of his future, though it was very faint—so faint, that he also hailed Jeff's coming. It had at least precluded her from replying to his last speech, as she had replied to the preceding one. He had bidden her remember to apply to him if she needed aid, and she had not refused to do so. Still, 'not to refuse' was far different from 'to accept.'

'Well, Mr Derwent,' said he, assuming a cheerful air, 'was I not right? Does not Mrs Dalton endorse your acceptance of my offer? You must learn to employ these business terms, you know; and he smiled pleasantly enough.'

'I have no choice,' answered the boy naïvely. Then conscious that the words were ungracious, he added precipitately: 'But if I had, I should always have felt grateful to you, Mr Holt, for a proposal which, though I know it is not made upon my own account, is certainly generous and unselfish; for I am afraid—at first, at all events—that I shall be of very little service to you. And now, please, I would rather be off. I will stay at the *Golden Cross* in London, where I used to put up on my way from school, till you choose to send for me.'

'O Jeff, don't go away like that!' cried Kate imploringly.

'I must, Kitty. Mr Holt himself said I was right to go.'

'Yes; but not this minute, my lad. That will only make a disturbance in the house, and distress others besides your hostess, which I am sure you do not wish to do.—There is the postman's horn. Now, why should I not have a letter of importance that demands my presence in town to-morrow morning? Then you and I can start to-night.'

'I am afraid that would be hurrying you away,' hesitated Kate; 'but still, if you would'—

'You would be better pleased, Miss Dalton,' interrupted Holt with a touch of bitterness: 'that settles the matter. We must be off by the 6.30 train, my lad; so I will go and put my traps together.'

He did not wait for thanks from either of them, but repaired at once to his own room. He ran upstairs three steps at a time, for he felt like a young man. By a great piece of good fortune he had contrived to lay Kate Dalton under an obligation, and had made his first step with her in the way of friendship, familiarity, confidence. As to the *per contra* side of the account, his engagement of Geoffrey Derwent, it weighed but as a feather's weight in the balance. Indeed, he was by no means certain that it might not be placed in the same scale. If he found Derwent able to do his routine work, it might even be a good stroke of business. Of course, he would take care to treat the lad well and handsomely; but indeed he intended to make him something else than a mere clerk. He had long been of opinion that his 'manager,' Brand, was too clever by half, and had resolved to take the first opportunity of parting company with him. The same objection, he reflected with a contemptuous smile, would certainly not apply to Jeff.

There was not one member of the party at Riverside who was not grateful to Mr Holt that evening. By persuading Geoffrey Derwent to avoid a public scandal—which his flight, as originally intended, would certainly have caused—he had done good service to Mrs Campden, of whom the lad was now persuaded to take leave, though in a very stiff and formal manner. The Daltons were sincerely obliged to him, on Jeff's account; and 'Uncle George,' whose conscience reproached him for his pusillanimity in that matter, still more so. Moreover, as a host relieved of an incubus, Mr Campden blessed his guest for taking himself off.

His departure did not long precede that of those to whom he was originally indebted for his invitation, though for the future he had the assurance of its coming—and that soon—from the fountain-head, namely, the hostess herself. On the third day afterwards, the Daltons took up their residence at the Nook in Sanbeck. Before they left, Mrs Dalton received a farewell letter from her husband, written from on board the *Flamborough Head*. Knowing what we do of him, we can pretty well imagine its contents: but amid all the love and pathos of his parting words—he made no mention of his remorse, since he knew it would distress her—there was a sentence or two of genuine rebuke.

'When I asked to be shewn my berth—which, as I had been informed, I was to share with "a commercial gentleman," bound for Rio—to my

great surprise I was introduced to a first-class cabin. Some one had called, they told me, at the London office and paid the difference for the exchange. Of course I know who sent him, and why you were so particular to ask me about the agent's address. My darling, to think that you should have robbed yourself just now to supply me with a mere luxury, goes to my heart. How could you, *could* you do it?'

Yet what he deemed—and justly—to be self-sacrifice, was in one respect an act of selfishness. Nothing the money—or ten times the sum—could have brought her, would have given Mrs Dalton half the satisfaction she derived from this reflection, that so far at least as his physical needs were concerned, 'dearest John' would be made comfortable upon his voyage. She was herself bound upon a longer journey far than his (as she was well convinced), and one with more uncertain issues; but her chief thought and care were still, as they had ever been, for him.

CHAPTER XXXI.—REALITIES.

It is not to be supposed that the Daltons, being so well liked a family as they were, were neglected by their friends because misfortune had befallen them. Human nature is not quite so base as some philosophers would have us believe, though there are a great many selfish persons in the world, and especially (I am afraid I must say) in good society. John Dalton had been right in his idea that he was rather an obstacle to the good-will of others towards his belongings, and that if he were dead they would find many offers of assistance that were almost of necessity withheld while he was alive. Even his departure for Brazil brought some of these into blossom—nay, into solid fruit, if only Mrs Dalton had cared to pluck it. One good lady would even have taken Kate off her hands—she had been always 'so fond' of Kate—for good and all; though it must be owned that her proposition was a little vague. Another would have been glad to offer Mrs Dalton and both daughters a home, 'while they looked about them for a suitable residence.' Condolences and sympathetic inquiries had long been rained in showers upon this unfortunate lady; so that not the most cynical could have described her as forgotten. But the fact is, admitting that there is any number of mean and miserly people in the world, who will weep for their friends in need, pray for them, sympathise with them, and, in brief, go to any length short of assisting them, it is also difficult—it must be confessed—to afford assistance such as would be acceptable. I would on no account be supposed to have any of that 'enthusiasm of humanity' which the critics agree is a sign of the feeblest intelligence; I know how easy it is for folks to condole with their friends upon the loss of their relatives, and how difficult, because dangerous and compromising, they find it to do so on the loss of their goods; but it must be acknowledged withal that, hard as we may find it in this world to help ourselves, it is even harder to help others who are helpless. People are not more malleable, do not fit into any shaped groove that may be offered to them, the more easily because they have become poor. Mrs Dalton had two fixed ideas, in adhering to which she was resolute, and which, without doubt, rendered their case very

impracticable—namely, (1) that she would not be separated from her girls; and (2) that they should have a home of their own, however humble. Sorrow, she knew, is doubly grievous when it has to be borne with a forced smile, as it needs must be when we are guests in the house of a friend. Otherwise, when Lady Skipton wrote to invite Kate, Mrs Campden was strenuous in urging that her offer should be accepted: 'It would give the poor girl a chance once more, in the way of suitors; and perhaps she added also to herself, 'and how convenient it would be for Mr Holt in particular, to prosecute his attentions.'

These kindnesses, these offers, these well-meant attentions of all sorts, were, however, all laid before her daughters by Mrs Dalton, not so much that each should have a voice in their acceptance or rejection—for she well knew what their replies would be beforehand—as that they should understand their own position with respect to others. Even when these communications were unpleasant, as they sometimes were, she did not withhold them from their eyes. It was well that they should look the world in the face, since the time was coming when there would be none to disguise from them its stern realities—when the hand should be powerless that had secretly warded off from them its sharpest buffets, and the voice that had interpreted its tones so tenderly for their sakes should be stilled for ever.

One little indulgence Mrs Dalton did permit herself—she resolved that Tony should not be sent to school for another half-year: he was still young for Eton: his education under Jenny's auspices was going on quite satisfactorily; he was a diligent little fellow, and did not require to be nailed to his work, &c. All which excellent reasons were contained in one still greater, though she never owned it to herself: 'I cannot spare the boy; let us all be together for a while, and while we may.'

Instead of saying, 'This is weakness, Edith,' as might have been expected from so uncompromising and well-principled a person as Mrs Campden, that lady fully approved of this arrangement; and would not, perhaps, have murmured if it had been decided not to send the boy to school at all. As for Tony himself, the prospect of the new life at Sanbeck almost made up for the postponement of his Eton joys.

CHAPTER XXXII.—LADY SKIPTON'S CHARITY.

Mr Campden was sorry to lose his guests, yet not altogether so, so far as he himself was concerned; they had already begun to be the cause of quarrel between himself and his wife. He was inclined to be kinder to them in his manner, because of their misfortunes; and this his Julia stigmatised as 'weakness,' and even as cruelty to those he pitied: they would only miss everything afterwards the more, she said, from the sense of contrast; and she took care not to err in this way herself.

When the little family were all in the Riverside barouche together on their way to their new home, Tony put this question to his mamma, preceded, after the fashion of his age, by an affirmation: 'I am precious glad we are going to Sanbeck. What has made Mrs Campden so cross with us all since papa went away?'

Kate and Jenny exchanged a rapid glance.

'Even Tony has remarked it, you see,' said the latter in French. She had spoken of the matter to her sister with vehement indignation, which Kate had endeavoured to mitigate; like her mother, she always strove to find excuses for people.

'Cross, Tony?' answered Mrs Dalton quietly. 'I am sure I didn't know she had been cross. Perhaps you were troublesome.' She thought it best to ignore the general charge of crossness altogether.

'O no; I wasn't, mamma. Only she used to call me "her sweet boy," and now she says "You little nuisance."'

Nobody answered this observation, since it was impossible to refute it. Only Jenny laughed—a little bitter laugh. She had coldly touched her hostess's lips without a word, after her mother and sister had expressed their thanks for Mrs Campden's hospitality, though she had kissed Mary tenderly, and thrown her slender arms about Uncle George, and bidden him quite an extravagant adieu.

'I wish Jenny was not quite so "thorough,"' Kate had sighed to herself; 'though one loves her all the better for it.'

Mrs Dalton, too, had dropped a tear in secret over that independent spirit of her second daughter, which under present circumstances could not but be detrimental to the poor girl.

But Jenny neither sighed nor wept. She had an honest contempt for all scoundrels, as her favourite Carlyle would have expressed it, and in her indignation against them, was apt, like himself, to spare neither sex nor age, nor even social position in the county.

'That woman is a mean wretch,' was her private comment upon Tony's bill of indictment against his hostess.

The people in Bleabarrow acknowledged their presence civilly as they passed through the little town: the young with pulls at their forelocks, or rapid courtesies; the elders, with grave obeisances, as they stood at their shop-doors.

'They little think we have only one hundred and fifty pounds a year,' thought Jenny. This was a mistake of hers, for the bows were given to them as occupants of the carriage. To the British provincial eye, a fine equipage is little inferior in dignity to the Ark among the Hebrews. Indeed, even in the metropolis, it must have something sacred, or at least curiously significant, as it is often sent empty to 'represent' Royalty itself at the obsequies of our great men.

In Sanbeck, as usual, the barouche created a still greater sensation. It was followed upon this occasion by a *fourgon* containing the luggage. When they had deposited their burden and driven away, 'There go our last pomps and vanities,' said Jenny philosophically. 'Now for the crust and the cross.'

It was a relief to all of them to find themselves under their own roof. Even Lucy—about whom they had naturally some misgivings—expressed herself as agreeably disappointed, and pronounced the clipped yews upon the little terrace, which represented winged dragons, 'evenly.' She shewed much affability to Margate, as the late Jonathan Landell's housekeeper was called (but probably not after the fashionable watering-place), and spoke of her eulogistically as 'quite a character.' She was, in fact, a great curiosity, being an honest, simple, old

woman, who had done her duty in the world for sixty years, to the best of her ability; if she had ever possessed the vanity of her sex, it had long departed; but she did think that there was no one in Derbyshire who could in its season make a better black pudding than herself; and she had just cause for her confidence. The only trial she ever caused her 'young ladies' was when she would proudly set this delicacy before them as 'a surprise,' as the cookery-books say, and then wait to see them eat it. Tony was the only one who appreciated it, and yet they could not have wounded old Margate's pride for worlds, by leaving it on their plates. Black puddings added another terror to winter at Sanbeck, for they came in with the cold, as fruit does with the warm, weather. Margate's familiar and assistant, Nancy, was a stout village lass, the very incarnation of good-nature, but with no particular beauty to boast of, save the unusual one (for persons in her position) of a set of dazzlingly white teeth; a very fortunate circumstance, since it was her custom to keep her mouth wide open.

'I do think, Kitty, we shall be happy here,' was the verdict passed by Jenny upon the Nook and its belongings, on the night of their arrival.

'If only it suits dear mamma,' faltered Kitty.

Jenny had equally thought of that, we may be sure; and both were well aware that it was not a question of 'suiting'; Mrs Dalton would have been content with far inferior lodgment and ruder fare. But there was something underneath the cheerfulness of her face, and which belied it, that both her daughters read. She had exhibited no curiosity about the house, though she had striven to appear interested in what they told her of it; her only solicitude had been expressed concerning the post—as to what time the letters arrived in Sanbeck.

It was very improbable, indeed, that any communication should be received from her husband for some time to come; yet every morning, when the horn was heard—it was near noonday generally—her eyes would light up with expectancy, and her pale face flush, till the postman had passed the house. Jenny, too, had her anxieties, it seemed, in this respect, for on the third day after their arrival she walked out alone to meet the postman. There was only one letter for the Nook, and that was for her; it was evidently the one she had expected, and she took it eagerly from the man's hand. It was an answer to one she had written to Lady Skipton, after much consideration. Folks had often praised her lace-work, telling her that nothing equal to it was to be got at the shops; that it was worth six guineas a yard at the very least; &c. &c. So she had resolved to utilise her gift of lace-making, for the benefit of her belongings. Under other circumstances, she would have applied to Mrs Campden to effect this; but she felt too angry with that lady to ask any favour of her, however small. So she had written to Lady Skipton, an old friend of her mother's, and who had always been kindly disposed towards herself, inclosing a yard of her lace, as a specimen, and begging her to find out at what price such work could really be disposed of. If the reply was satisfactory, and such as she had always been led to expect, so far from being a burden to her family in their altered position, she could easily double their present income. Instead of returning home,

where she would be subject to interrogatories, she entered a labourer's cottage, where the auld wife placed a chair for her by the fire, to read the letter. The poor girl would have much preferred to do so in the open air; but the unusual exertion of walking a few yards alone had already fatigued her, and her white face had appealed to the old dame's hospitality. 'Now read your note, young leddie, and dinna mind me,' said she, and then had busied herself about her household work as usual. The contents of the envelope felt thicker than ordinary, and when Jenny opened it, and found a five-pound note within the folds of the letter, she gave a little cry of joy. It was doubtless the price of the yard of lace which Lady Skipton had sold for her in Regent Street or Bond Street, and perhaps she had sent orders for ever so much more. Every one who has looked upon the first money made by their own exertions will understand something of the pleasure which Jenny experienced at this spectacle; but in her case the joy was enhanced tenfold by the peculiar circumstances of her position. Instead of lifelong dependence upon others, here was independence for herself and for them.

'Ye will have good news, missie, I reckon?' said the goodwife, as she saw the light leap into her young guest's eyes.

Jenny did not answer, for she was already deep in her ladyship's letter, if depth could be obtained in anything so shallow. It was a long rambling rhapsody upon the Daltons' troubles, dotted with 'so sorry' and 'no one out of my own family so dear,' and not a word about the lace, except in the postscript, which ran thus: 'As to your beautiful work, dear Jenny, we all admire it above measure; but you know an amateur can never compete with these professionals; one can hardly go asking tradespeople what they will give for the production of a young lady—one's own personal friend too—and I am sure it could only result in disappointment; you might work your fingers to the bone, and only gain a few shillings. But if you will let me be the purchaser—just for this once, at all events—I shall be so pleased. I have no doubt you will find a use for the payment which I inclose herewith.'

Jenny's heart did not sink; it was not of the composition that does so, yet it turned heavy and cold. 'They are all alike,' she murmured bitterly; 'all base and cruel alike. This woman could not even ask a question for me, because of her false pride.' She folded the bank-note up very small, and gazed wistfully into the fire. 'That is where I should like to put it,' she went on; 'only she would never believe it.' Then she rose and thanked the woman of the house for her hospitality.

'Lor, missie! don't speak of it. We would all do a deal more for ye than that.'

'Why?' inquired Jenny brusquely.

'Because the doctor has told us all about ye, and whose was the hand that has given many a bit and drop to them as needed it in these parts. You're poor yourselves, I hear, now, missie, but it will nae be for long; the blessing o' the poor is on ye, and ye will thrive yet.' The woman, a hale and hearty one, though old, spoke with earnest energy.

'Thank you, dame,' said Jenny simply, and she felt genuine gratitude. The other's words had put

a strange confidence into her: it was a comfort too to feel that she had confided to no one her intention of writing to Lady Skipton. No one could remonstrate against her returning that five-pound note to her ladyship by the next post. Money in some cases is said to 'burn in the pocket'; but no spendthrift ever felt such a desire to get rid of a bank-note as now burned in Jenny's heart. She did not want five pounds for what was only worth a few shillings. Her ladyship need not have been so afraid of having to buy more lace at that fancy price. 'Just for this once, at all events,' was a phrase of quite unnecessary precaution; but it had wounded its recipient to the quick. 'Work her fingers to the bone.' Yes; she would do that, and more, before she ever appealed to that woman for assistance again, or indeed to any one. She had another string to her bow, which did not depend upon friends (so called) at all, and she now regretted she had not tried it first. If that failed—God help her!

Then she smiled to herself to think of the absurdity of that last reflection; as though we should only trust in God when all other means fail. Such a phrase was surely as ridiculous as Mrs Campden's 'D.V.s,' which she was so careful to introduce in her ordinary correspondence. How angry poor Jeff made her once by telling that story of the old lady who would 'come to tea on Wednesday, D.V., but on Thursday at all events.' By the time Jenny got home—it took her a long time to walk even those few yards—she was quite herself again.

The days rolled on at the Nook for Jenny faster than for the rest; she was used to solitariness, and never tired of reading, and Mr Landell's library gave her endless occupation in that way; almost all the books, though old, were new to her, and some of them very strange and curious. Tales of witchcraft, fulfilments of dreams, treatises upon simples, local superstitions, habits of birds and beasts—the quaintest and most old-fashioned ideas imaginable, whereof one in twenty were really noteworthy, and through desuetude had become novel. Tony, too, after he had done his lessons with her, found employment and amusement enough in the valley; but to Mrs Dalton and Kate the time hung heavy on hand. Mrs Campden and Mary drove over to the Nook occasionally; at first with laudable frequency; then less and less often; sometimes Mary came alone, and was always kind. But her kindness was of quite another sort than in the old days when Kate had been her 'dearest friend.' There was nothing to complain of in Mary—nor did Kate ever breathe a word of complaint against her—but she had evidently overrated the strength of her own attachment. Her visits became briefer, as well as rarer, being cut short by 'pressing engagements' here and there, such as in the old days would not have weighed with her a feather.

The doctor, indeed, called every day, but, unhappily, not as a mere visitor; Mrs Dalton, though she kept 'up and about,' was seriously indisposed, and gave him cause for much secret anxiety. 'My medicines,' he frankly told her daughters, 'can do your mother little good; the true remedy for her would be a letter from your father.'

But none such arrived, although weeks had gone by since Dalton's departure. The postman brought them few letters, indeed, now from anybody; though

there had been one or two from Jeff, speaking favourably upon the whole of his employer, and very cheerfully of his own position and prospects. He seemed to be in quite a responsible post—something altogether above that of a clerk. Indeed, there was nobody over him at all except Mr Holt himself; and yet he was by no means overworked. 'For all which, I know,' wrote Jeff, 'I have to thank dear Mrs Dalton.'

His immediate correspondent was Jenny, who, in return for his own confidences, wrote him a pretty exact account of how matters went on at Sanbeck; all which she well knew would have an interest for him. 'If we could only hear from papa, and mamma were better,' wrote she, 'we should not have much to complain of. Could you find out how long a letter *ought* to be coming from Rio? for, of course, papa would be sure to send us one by the first mail after his arrival. Would there not also be a chance of the *Flamborough Head's* meeting a ship coming home, and sending letters by it? We are all so ignorant here, and, alas, so helpless.'

To this Jeff wrote back a cheerful reply, stating in general terms that the arrival of the mails was more or less variable, and that the wind had been contrary; but added a private slip for Jenny's eyes: 'Don't breathe a word of it to your mother, but the Brazil mail arrived some days ago; Mr Dalton could not, therefore, have reached Rio when it left. Indeed, the *F. H.* was mentioned at Lloyd's yesterday as overdue. This is likely enough, with these west winds, and there is really no cause for anxiety as yet.'

'As yet.' Those two little words sent a stab to Jenny's heart.

REMINISCENCES OF FEN AND MERE.

Few men whirled rapidly southward in the 'Flying Scotchman,' and putting out their heads to catch a momentary glance of Peterborough and its cathedral, think of the time, not so long ago, when the fair and fertile region was a swamp pregnant with malaria. We read, it is true, of the ancient time when the forests of Western England were first cleared by monastic colonies, and 'Glastonbury Tor' rose like an island out of a waste of flood-drowned fen that stretched westward to the Channel. And we read, too, how 'wilder even than the western woodland was the desolate fen-country' on the eastern border of the kingdom, stretching from the 'Holland,' the sunk, hollow land of Lincolnshire, to the channel of the Ouse, a wilderness of shallow waters and reedy islets, wrapped in its own dark mist-veil and tenanted only by flocks of screaming wild-fowl; how here, 'through the liberality of King Wulfere, rose the Abbey of Peterborough; and how here, Guthlac, a youth of the royal race of Mercia, sought a refuge in the solitudes of Crowland; and so great was the reverence he won, that only two years had passed since his death, when the stately Abbey of Crowland rose over his tomb. Earth was brought in boats to form a site. The buildings rested on oaken piles driven into the marsh. A great stone church replaced the hermit's cell, and the toil of the new brotherhood changed

the pools around them into fertile ground.' The Abbey of Ely, stately as that of Crowland, was founded in the same wild fen-country by the wife of Egfrith, king of Northumbria. But in his *Reminiscences of Fen and Mere*, the volume now under consideration, Mr Heathcote deals with the days of his own boyhood, and we will follow the story as he tells it—the story of the eastern fens, of the district 'bounded on all parts by highlands, from that point of land about Hunstanton in Norfolk to Winthorpe in Lincolnshire.'

That great fen-level comprehends some seven hundred and fifty thousand acres of land, of which, in South Lincolnshire alone, so recently as 1817, seventy-five thousand acres lay under water for the greater part of the year. In a curious notice of the ancient condition of the inhabitants of this damp county, we find its little townships thus described: 'They were small, rustical, and wild; the fashion of their houses had little changed since the days of the ancient Britons. The houses, or huts, were of a round shape, and not unlike the form of bee-hives. They had a door in front, and an opening at the top to let out the smoke, but window to let in light there was none. The walls were made of wattle and daub. The roofs, of rushes or willow branches, cut in the fens.' The condition of an Eskimo's hut would be about as comfortable. Fenmen still use the same pole which was in fashion eight hundred years ago, when we find a young novice in Crowland Abbey making his way to Spalding with a leaping-staff 'fashioned like the staff of a pilgrim; the lower part armed with a heavy iron ferrule, from which projected long steel nails and spikes.' In those days 'the kingfisher flitted across the traveller's path; the wild duck rose from the fen, and flew heavenward; the heron raised itself on its long legs to look at him from the sludge; the timid cygnet went sailing away in quest of its parent swan.' The Isle of Ely—now so fertile, which takes its name from *Helig*, the British name for willow, on account of the willow-trees which grew into almost impenetrable forests there, concealing the marshes and quagmires beneath them—was to all intents an inland island, surrounded on all sides by lakes and meres and broad rivers. Three thousand eels, taken close under the very walls of the abbey, were by ancient compact paid every Lent to the monks of Peterborough, for leave to quarry stones in a quarry appertaining to Peterborough Abbey. And ten times the number might have been paid, and not been missed, says the old chronicler. That this vast marsh had once been dry firm land, undisturbed by the stagnation of fresh, or the inundation of sea water, is sufficiently proved by the great number of trees which have been dug up, such as oak and fir, which will not live in water. Curious little incidents are perpetually occurring, when the soil is dug down to any depth; for instance, at Whittlesea Mere, eight feet below the moor, the diggers came to a perfect soil, and swathes of grass lying as they were first mown

down; and at Skirbeach sluice, near Boston, there was found, at sixteen feet deep, covered with silt, a smith's forge and all the tools thereunto belonging; at a still greater depth, furze bushes and trees have been found standing in solid earth below the silt; while the earthy strata of the fens have proved a perfect mine of interest to the geologist, who has found remains of hippopotami, rhinoceros, ibex, elephant, and walrus among the buried treasures. We find, in ancient days, the wild boar of the fen so plentiful that the head only was served up, while in later days, 'it was facile to snare the crane, the heron, the wild duck, teal, the eccentric and most savoury snipe, the swallow-kite, the swarth raven, the hoary vulture, the swift eagle, the greedy goshawk, and that gray beast the wolf of the weald.'

Crowland lay amongst the deepest fens and waters stagnating off muddy lands, so shut in and environed, Camden writes, as to be inaccessible on all sides except north and east, and that by narrow causeways. And with an apology for comparing small things with great, he says it is not unlike Venice! 'consisting of three streets, divided by canals of water, planted with villas, and built on piles driven into the bottom of the fen, and joined by a triangular bridge of admirable workmanship.' Dugdale, whom Mr Heathcote largely quotes, says that the overflowing of rivers made a deep lake, rendering the place uninhabitable except in high places where the monks resided, and to which there was no access but by navigable vessels, except into Ramsey 'by a causey raised on the one side thereof.' In these precincts was Ely placed, encompassed on every side by fens and waters. On the borders of this district is Connington Castle, which in 1753 was purchased, with the manor thereunto appertaining, for two thousand five hundred pounds by Sir John Heathcote. In those days it was possible 'to get into a boat from the windows of the dining-room on the ground floor, and paddle off to shoot coots on Connington Fen. The farm-horses used to plough with wide boards attached to their shoes by straps.' As recently as 1805, a small cutter was brought into Whittlesea Mere (now all under cultivation), which drew two feet of water, and had a large mainsail, foresail, and jib, a cabin where eight persons could dine, an after-cabin, sleeping-berths, and a kitchen. In that small craft, for many a year, parties were made for sailing and fishing. Professor Sedgwick relates how, in 1809, he started from St John's College, Cambridge, and walked all night, that he might join his friends at Whittlesea for a merry day's fishing on the mere. In 1842 there was a regatta on the mere; and not few are the regrets of the naturalist, who can recall the days when a pike weighing fifty-two pounds was taken from the lake, and the great copper-butterfly glistened in the sun. To him it is small compensation that 'over the habitat of the fen-fowl Ceres now pours her golden gifts.' The whole country, extending, as we have said, from Hunstanton in Norfolk to

Winthorpe in Lincolnshire, and embracing some seven hundred and fifty thousand acres, was the delight of artists and of every one else capable of appreciating the kind of beauty Cuyt and Ruysdael, Teniers and Hobbima, have cared to paint. With the enthusiasm of a true fenman, Mr Heathcote writes: 'Those who have studied the principles of Dutch art, and know the basis on which the fame of that school permanently rests, will acknowledge that the fen-country, *when in an undrained state*, teemed with the beauty which the artists we have quoted above have embodied in their works. Here,' he says, 'were found the same long flat lines, the same richness of local colour, arising from an exuberant flora, the forms of cattle reflected in the drains, the mills, the dwellings, dress, and habits of the inhabitants, the boats which navigated the rivers, and the same conspicuous atmospheric effects, contingent on the exhalations, rising and falling above the swampy surface. All these objects are included in the term picturesque, and from time immemorial have been a source of inspiration to those who desire to represent the real appearances of nature.' But perhaps, in the eyes of the artist or the student bent on a holiday, the fens were never more enchanting than in time of frost; when cottages 'modern thought has learned to despise and calumniate,' with willows and trees denuded of leaves, made picturesque groups, and the mills stood out bare and gaunt against the sky; and it was possible to skate from Connington to Ely Cathedral and back in the course of a winter's day. Indeed, in 1799, one Francis Drake, an officer of the Bedford Level Corporation, is said to have put on his skates at Whittlesea, and crossed both the Middle and South Levels without taking them off; a distance of nearly fifty miles.

During the continuance of frost, 'the occupation which excited the greatest interest was a skating race. A good surface of ice gave as good a prospect of competition, and as happy a holiday, as a day of the Derby.' The candidates for the prizes, Mr Heathcote says, came from the surrounding towns and villages of the fens, and much rivalry was excited between them. The prizes offered were a cocked-hat, a pig, or a purse containing from one pound to twenty pounds. But life in the fens, even on its picturesque side, was not all holiday. 'During frost, when the rivers and drains were frozen, and when high-land work was slack, a winter harvest commenced. The cutting of reed and sedge was a busy and interesting scene. A gang of ten or twelve labourers in rich, warm, stuff jackets and high fen-boots, were employed in cutting white reeds fourteen feet high, with brown feathery flowers in filaments at the top. The reeds were laid in bundles, piled in sledges which ran on marrow-bones, and were removed along the ice to the entrance of the lodes or rivers where they were stacked, and left for further removal when the river-navigation was open. The sedge was mown; and the scenes presented during the harvest-days were exceedingly picturesque.' We can easily believe it, and also that the rarest butterflies and the richest wild-flowers were to be found in the same neighbourhood. But to all this pleasant picture there was another side.

Those same 'conspicuous atmospheric effects,' so

precious in the eyes of the artist, could not conceal the malaria which lurked beneath them. The 'old draining-mill' was a picturesque object enough, but it did not save the land from being for weeks at a time under water, when the winds happened not to blow, and its cumbrous machinery was at a stand-still. It might be pleasant for the squire to get out of his dining-room windows to a boat, and paddle to a day's shooting; but it was less so to his steward, 'who, when he drew on his fen-boots in the morning, left the floor of his cottage and the legs of his bedstead covered with water.' Cottages with fireplaces but with no egress for the smoke, are familiar to the mind of the Arctic traveller, but scarcely compatible with English ideas of civilisation. In honest truth, the whole *morale* of the fens, social and physical, up to some thirty years ago, was at an exceedingly low ebb. Dr Adam Mercer, writing in 1505, says of the fen country: 'It is one of the most brute and beastly of the whole realm, a land of marshy ague and unwholesome swamps.' The oldest Anglo-Saxon poem we have, of any considerable note, the legend of Beowulf, speaks of the monster Grendel, born and bred in the marshy swamps of Lincolnshire; and some modern interpreters have even gone so far as to believe the monster with his deadly grip, coming ever in the night to destroy the bravest in the land, to be but another name for the deadly malaria which was exhaled from those dreary fens. In 1620, we find James I. 'for the honour of his kingdom determined no longer to suffer these countries to be abandoned to the will of the waters, nor let them lie waste and unprofitable,' but 'did himself undertake by a law of sewers a great work of drainage.' But the design was opposed by those corporations to whom all progress is evil, or as the old chronicler Mr Heathcote quotes, puts it: 'He who will do any good in sewerage must do it against the will of such as shall have profit in it.' An old ballad quoted by Dugdale, in his History of the Fens, in 1620, shews the spirit in which innovation was regarded by the fen squatters. Here are two of the verses:

Come, brethren of the water, and let us all assemble
To treat upon this matter, which makes us quake
and tremble;

For we shall rue it, if it be true the fens be under-
taken;
And where we feed on fen and reed, they'll feed
both beef and bacon.

The feathered fowl have wings, to fly to other
nations,

But we have no such things to help our transporta-
tions;

We must give place—oh, grievous case—to horned
beast and cattle,

Except that we can all agree to drive them out by
battle.

Macaulay, writing of the condition of the fen-country at the close of the seventeenth century, speaks of 'a vast and desolate fen, saturated with all the moisture of thirteen centuries, and overhung the greater part of the year by a low gray mist, above which rose, visible many miles, the magnificent tower of Ely.' In that desolate region, covered by vast flights of wild-fowl, he says, 'a half-savage population, known by the name of Breedlings, led an amphibious life, sometimes

wading, sometimes rowing from one islet of firm ground to another.'

In many a parish of the 'Holland' of Lincolnshire, even so late as the middle of the present century, ague and opium-eating went hand in hand. In 1793, Arthur Young reports 'that numbers of sheep die of the rot when depasturing in the drier parts of the fen during the summer months; that the number stolen is incredible; they are taken off by whole flocks; whole acres of ground are covered with thistles and nettles four or five feet high, nursing up a race of people as wild as the fen.'

In 1795, a thousand acres in Blankney fen were one of the most fertile parts between Lincoln and Tattersall. They were let by public auction at Harecastle, and the reserved bid was ten pounds for the whole tract. More or less was this the state of things before 1840. Since then, all has been changed. The Middle Level Act was passed in 1844, and the lands of the Middle Level were taxed to the amount of two hundred thousand pounds; a subsequent Act imposing a further tax of two hundred and thirty thousand pounds. Engineering works for the drainage of this vast area were commenced and vigorously carried on; the task was an herculean one that had to grapple with seven hundred and fifty thousand acres of water; but the day was won. 'In 1850, the water finally left the bed of Whittlesea Mere dry. It had been made to flow out by a small cut of the New Middle Level Drainage at Foleaster Point, on the north-west side.' And now here, as over the whole district, came the question of the fertility of the land: would the huge experiment pay? A few facts may suffice. Within the space of thirty-five years, Mr Heathcote tells us, the annual rental of two hundred and fifty thousand acres, forming one-third of the area comprised in the Bedford Level, has increased one hundred per cent. An estate near Marshland, which before the drainage sold for seven thousand pounds, has lately been purchased for fifty-seven thousand pounds. Land near Ramsey which sold for ten pounds is now worth forty pounds an acre. Land once mere marsh and snipe ground is now yielding returns which may be estimated thus, according to Mr Heathcote's calculation: Three thousand acres, formerly the bed of Whittlesea Mere, now corn-land and pasture, furnish wheat for three thousand three hundred and twenty-nine persons; oats for three hundred and seven horses; beef for three hundred and eighty-two persons; mutton for three hundred and six. Add to this the whole question of the storage of the water drained away, about which we will give one detail with one set of results. The Ely Level Board of Health has been in existence only five-and-twenty years. The total cost of its water-works was sixteen thousand pounds. The population of the town is eight thousand. *All cesspools have been abolished.* Thirty-five gallons of water per day are allowed to each person, and an unlimited supply to the town. The decrease of mortality is from 25-60 per 1000 in 1841-51, to 19-55 in 1861-71. It is all very prosaic, no doubt; but a diminished death-rate, higher wages, better food, may well compensate for the loss of 'conspicuous atmospheric effects, gorgeous butterflies, and savoury snipe in a great district, rendered by sheer force of modern industry one of the most fertile and most healthy, instead of the most miserable in the

whole land. After all, poet and artist would do well to remember, that turning a swamp into a corn-field is but the nineteenth-century version of causing the wilderness to blossom as the rose.

A DILEMMA.

IN TWO CHAPTERS.—CHAPTER II.

THE two young men were fairly off Mr Duhamel's ground before they exchanged a word. Marco Castelli did not often begin a conversation, especially in English, and Emile was fairly at his wits' end; at last he spoke.

'What am I to do? I believe the best way would be to leave here at once, and when we are safely back in France, write to Miss Duhamel, and tell her the whole story. Neither she nor her father would hear it to-day.'

'Yes,' said Marco, who had simply come to England because Emile did, and who had no desire to stay there—'yes, that is best.'

'But then—poor Eugène—I say, Marco, what a beauty she is!'

'Very pretty,' assented Marco.

'Pretty! She is perfection! We should be fools to go away without seeing more of her. And yet, she cannot have cared a bit for Eugène.'

'English people have no hearts,' said Marco dryly, delighted at being successful in remembering that favourite calumny.

'Nonsense, my friend,' answered Emile sharply. 'Besides, she is not English. She was born in England, and had an English mother; that's all. Otherwise, as pure French as I am.'

Mr Duhamel was impatiently looking for his guests when they re-appeared at seven o'clock. Claire, lovelier than ever, was flitting about, and saying a word now and then to her cousin about Eugène. The June evening was still light and warm; and the flowery drawing-room, with its abundance of colour and perfume, was a fit shrine for such a dainty nineteenth-century nymph. So Eugène's representative thought, as his eyes greeted her, and a pang of envy—envy of his lost friend—went right through his heart, and shocked him. The puzzle of the morning was not solved. He had told Mr Duhamel, and Claire herself, that Eugène was dead. Either they were rather glad of it, or they did not believe him. But if they did not believe him, why did they not treat him as a rogue, an impostor? And how could Claire be glad of her freedom, she who had written those letters, full of innocent girlish affection, which his dead friend had bidden him read?

'I will let things go,' was Emile's last resolve. 'It is a midsummer night's dream, and I'll make no further effort to break it.'

It would have been pleasanter, perhaps, if Mr Duhamel had not seemed to take such a singular pleasure in calling him by his name. He could not even say: 'Monsieur de Bellechasse, will you take Claire in to dinner?' without a pomp that made it sound as if he had said 'Monsieur le Marquis de Carabas;' and he looked so excessively mischievous and knowing, that he was a most embarrassing host. Miss Burton looked a little puzzled too, and evidently examined both the guests with some curiosity. She made herself very agreeable to Marco, who, finding that she could speak Italian, ventured to disregard his leader, and refresh himself with his native tongue. After

all, however, other people might be or do what they liked, they could not much affect Emile's happiness. Claire sat beside him, Claire smiled upon him, Claire talked to him with the grace and gaiety which he had found in her letters; Claire was rapidly dazzling the young man into that condition of blissful folly sometimes heard of as 'love at first sight.' She was so happy herself! She had quite forgotten what the story was with which her Eugène had introduced himself. He was pretending to be somebody else—perhaps to test her constancy to his imaginary absent self—and her clever father had found him out; that was enough for her. Since he was everything she wished in other respects, that one little whim might be forgiven him. The test was easily stood.

After dinner, the gentlemen, none of them being English, followed the ladies out of the dining-room; but on their way to the drawing-room, Mr Duhamel renewed Emile's doubts of his sanity.

'Are you satisfied now, Monsieur de Bellechasse?' said he, aside, 'or do you mean to keep up your comedy through another act? You might as well take me into your confidence, for you can't deceive my eyes, you see.'

He trotted off, after this mysterious sentence, with such an intensely knowing expression of countenance, that the unfortunate messenger of evil tidings had almost fled from the house and its enchantments there and then. In his distress, he was suddenly aware of a pair of serious and luent eyes regarding him. They were those of Miss Burton; and with a sort of gasp of relief he took deep into his mind the conviction that *she*, at any rate, was sane, and safe—neither bewitched nor bewitching. 'She knows what it means, and will tell me,' he said to himself; but how to speak privately to her? She was still good-humouredly giving her attention to Marco, and Emile himself would have been the sport of perplexity for ever, rather than voluntarily desert the girl, who seemed tacitly to claim him. Mr Duhamel regarded the young people with looks of delight. He hovered round them, putting in a word now and then, and making Claire shew off for the benefit, or to the undoing, of the helpless victim. At last she was bidden to sing, and while she was turning over her songs, and calling upon Anne for advice, Emile found an opportunity of whispering to his companion: 'Ask what it means. You must find out why they treat us in this way.' Marco nodded; but Emile did not feel certain that he had understood; for many of the sayings which were most irritatingly problematical to him, had never reached the Italian's consciousness at all.

At last the evening was over, and the mid-summer night's dream was a more complete, more entrancing dream than ever. The two cavaliers walked slowly away through the dewy darkness, and one of them kept his head turned till the very last possible moment towards the white-robed figure lingering at the open window.

She seemed a splendid angel newly drest,
Save wings, for heaven,

he repeated to himself; and then:

Her very frowns are fairer far
Than smiles of other maidens are.

M. de Bellechasse prided himself greatly on his acquaintance with modern English poetry, but

the appropriateness of his quotations did not trouble him. He came back to prose with a sigh, and a comfortable recollection that Marco would not understand him, and eagerly inquired: 'Well, what does Miss Burton say?'

'Says that you may be Eugène Bertand.'

'What? That I am?'

'Eugène. That you perhaps pretend to be De Bellechasse.'

'Good heavens! They are mad, then! Explain!'

'In Italian, then?'

'As you will.'

Marco then proceeded to state that Anne, questioned by him, had honestly told him the true state of the case. She had, perhaps, already begun to suspect that her uncle was mistaken, for had she not reasons of her own to doubt his discernment? She, upon the whole, believed Marco when he assured her that his companion was *not* Claire's betrothed; but when he begged her to make Claire and her father understand, she positively refused.

'I should offend my uncle, and throw Claire into confusion and distress,' she said. 'I strongly advise you and your friend to let the mistake go uncorrected for a little longer—that is, if Monsieur de Bellechasse admires Claire as much as he seems to do.'

'Admire her!' repeated Emile, when Marco had conscientiously reported this advice. 'I have admired plenty of women, but I never saw one like this. Wise Miss Burton; I will do as you bid me; but for how long?'

'Let the mistake go uncorrected,' Anne had well said; but in saying so, she reckoned without her host. Mr Duhamel was far too proud of his discernment not to be impatient to force his future son-in-law to confess.

The two young men were to be at Mr Duhamel's in good time next morning. Both Claire and her father had willed it so; and Emile had been too weak to say 'no.' He had argued with himself that it was impossible for him to run away while they were in their present position; and propped by Anne's advice, he meant to take all the good provided—and wait. But as he walked up to the house, his mind was still unsettled and uneasy. A harum-scarum by nature, and already fathoms deep in love, the temptation to yield, and allow himself to play the rôle forced on him, was great indeed. Yet, on the other hand, he shrunk from defrauding at once the dead Eugène, and Eugène's betrothed. And finally, honour got the better, for the moment, of love. 'I am going to compel them to believe the truth,' he said to Castelli. 'I shall have a fight with the old gentleman, and get it over. Poor girl!'

'Stupid old man,' answered Marco, with his usual deliberateness.

Mr Duhamel met them at the door, and Emile begged for a few minutes' conversation, and was taken to the scene of their first meeting.

'Well, Monsieur de Bellechasse,' Mr Duhamel began in great good-humour, without giving him time for a word, 'you have something particular to say to me?'

'I must beg you to believe me to-day'—Emile commenced, very earnestly.

'Yes, yes, my dear boy, of course'—

'What I told you yesterday,' he went on.

'I forgive you,' said Mr Duhamel heartily. 'And so does Claire. We know all about it, you see.'

'Will you tell her, then?' Emile answered, beginning to believe that Mr Duhamel must know what he was talking about. 'Let her understand that I had no intention of deceiving her'—

'Or, at anyrate, not much,' interposed the other; 'and quite innocently. But I hope you are satisfied now that she loves you?'

'I believed that she loved Eugène'—

'And that she *likes* Monsieur de Bellechasse, eh? As you please. And you don't *dislike* her?'

'I love her with all my soul,' cried poor Emile in despair. 'But pray, listen'—

'Claire! Claire!' cried Mr Duhamel; and before another word could be spoken, Claire, beautiful and bright as the summer morning, stood in the room.

'He has confessed, my child,' said her father laughing; 'and he says he finds you tolerable. So, what do you say?'

She said nothing; but put out her pretty little hand, and Emile, for all the world, could not have put it away from him.

'Bravo! bravo!' chuckled Mr Duhamel. 'Did not I say so, Claire? Did not I say so?'

'Dear Eugène,' said Claire, 'why did you try to deceive us? Was it for your own sake, or mine?'

'Did not I tell you he was romantic?' asked her father impatiently.

'You might have trusted *me*. Don't you remember what I wrote to you?'

'Could I forget it?' Emile answered.—'Oh, if I am to be cross-questioned, I shall be found out without fail, and just as I had given in,' he thought with disgust.

'What did I say?' Claire went on. 'Was it not that I never had thought, and never would think of anybody but you?'

'You said that,' Emile answered boldly, 'to Eugène'—

'And you answered,' she went on. 'What?'

'Why oppose her? She will not hear me,' said Emile to himself. Then aloud: 'Did not my answer please you?'

'Yes. But I want you to repeat it.'

'When I have said a thing once I mean it always,' he replied.

'But perhaps not this, because you had not seen me. Say it, if you mean it *now*.'

'Heaven help me!' thought Emile.—'But why should I have changed, Claire, since you are all, and more than all, I fancied?'

'Oh, how obstinate you are!' cried Claire, drawing her hand away from him. 'Papa, he will not say it, because he does not like me.'

'Now you mean to quarrel, do you?' said Mr Duhamel, laughing. 'I see I must settle it. Give me your hand, Claire.—Now, monsieur, do you care for this present I have here for you? It is precious, and deserves to be valued.'

Claire, between anger, fear, and innocent love, was watching his face keenly—to hesitate for a moment, would be, he felt, to lose her for ever.

'Only give her to me,' he answered; 'you shall never find me ungrateful.'

'Bravo! bravo!' cried Mr Duhamel again, and in a trice was out of the room, calling Anne as he bustled into the drawing-room.

An arrival had taken place there during his

absence. Sir George Manners was sitting near Anne, and telling her how he had been able to get away from London last night instead of this morning.

'Ah, Sir George!' cried Mr Duhamel, delighted to see him. 'Back again already? I wish you joy, my dear sir—I wish you joy!'

'Thank you. And you are to be congratulated too, I hear?'

'Yes. I have just left them together to settle their own affairs. A fine young man as one could find anywhere. Exactly what I always thought my dear old friend's son would be.'

'But rather whimsical, I should guess?'

'Ah, Anne has told you. Romantic, Sir George, romantic. These young people *will* be foolish. But he has confessed now, so we will say no more about it. And about yourself, my good neighbour?'

'I find I am sure of the money, Mr Duhamel.'

'There now; I could have told you beforehand what you would say. At Eugène's age, for instance, the lady is everything, and the money nothing. At yours, men are wiser. Sure of the money, eh? So much the better. The lady *brings* the money, so that's all right.'

'Not in my case, Mr Duhamel. You always warned me to expect my step-mother to defraud me. But for that, I should probably have tried to get a wife long ago.'

'Yes, of course I did. And I turned out right, you see.'

'Not quite right in the end. She quarrelled with her husband, and forgave me. Her death, about three weeks ago, has given me back all that my father left to her.'

Mr Duhamel gazed at his visitor with a face where dismay gradually gave way to congratulation. 'Well, well; I always said you would get nothing from her while she *lived*,' he said emphatically. 'And so now you have got two fortunes?'

'Only one. And I am reasonable enough to be satisfied.'

'But you said just now that you had made sure of your bride's money?'

'No, Mr Duhamel; only of my father's. As for my bride, I hope I am sure of her, but I should like to have your consent.'

'My consent?' repeated Mr Duhamel, bewildered.

'Yes, please, dear uncle,' said Anne, quietly coming to the side of her lover.

'What! Anne? What do you both mean?'

'Uncle, you do not wish me to be an old maid?' murmured Anne, smiling.

'No, child, no. Bless me!' said Mr Duhamel, 'who would ever have thought it? But she has no money at all to speak of!'

'Quite enough for me,' answered Sir George; 'thanks to my step-mother.'

Mr Duhamel here left the pair and trotted back to the study, where Claire and Emile were entertaining one another. 'Come with me, young people,' he said, 'and don't fancy you've got all the love-making to yourselves. Ah, I *did* suspect it once.' He led the way to the drawing-room, and announced cheerfully: 'Here is my son-in-law, Sir George—fairly caught at last, you see.'

'De Bellechasse!' cried Sir George, as Emile came in with Claire; 'are you here? Welcome to England!' and while they shook hands, he looked

expectantly for the appearance of Mr Duhamel's son-in-law, Eugène.

'De Bellechasse!' repeated Mr Duhamel and Claire together.

'Certainly,' answered Sir George. 'I did not know you were acquainted.'

'But, my good fellow, this is Eugène Bertand,' asseverated Mr Duhamel.

'Mr Duhamel,' answered Emile, 'do me the justice to own that I never said so.'

'You called yourself De Bellechasse, certainly,' Mr Duhamel owned—'for a whim.'

'Was it for a whim that I was called De Bellechasse in Paris, Sir George?'

'I have no reason to think so. Your conduct has always been honourable and straightforward. But what does all this mean?'

Claire had left Emile's side, and clung fast to her father's arm; both father and daughter looked confounded. It was Anne who came to the rescue.

'My dear uncle,' she said, 'you have only made a slight mistake, and one easily mended. This gentleman is *not* your old friend's son, but he seems very willing to act as if he were—why not let him?'

'Yes,' added Emile eagerly; 'only try me, Mr Duhamel.—Claire, don't, I beg of you, *don't* send me away!'

Claire could not help smiling; and Mr Duhamel saw a way out of his dilemma.

'As you will, then,' said he, suffering his good-humoured face to beam on the circle. 'But you are the only people I ever knew who were clever enough to mislead me.'

THE MONTH:

SCIENCE AND ARTS.

THE *Challenger* has returned from her three years' voyage round the world laden with specimens of plants and animals, with samples of the sea-bottom from many latitudes, and with observations and theories, all of which, when sifted and classified, will be taken into the service of physical science and of natural history. Two hundred cases of specimens, in addition to the prodigious heap previously sent home and stored in the cellars of the University of Edinburgh, imply an amount of work yet to be done in description and classification which seems overwhelming. It may be that Professor Wyville Thomson will find this harder work than the work of collection was amid vicissitudes of wind and weather. But not until it has been done can the results of the voyage be satisfactorily known. A popular account of the memorable cruise will in all probability be published before the end of the present year; and some years hence the scientific account of the voyage, with its discoveries, its facts and conclusions, will appear in a goodly series of quarto volumes with appropriate illustrations.

The *Pandora* yacht has sailed once more for Greenland and the Polar Sea to pick up news, if possible, of the Arctic expedition. It is thought by some naval officers, that if Captain Nares had a favourable season last year, he may, with the heroism of a first onset, have succeeded in reaching the Pole. Should this be the case, the *Pandora* will meet him coming home in triumph.

Notes of a Voyage to Kerguelen Island to observe the Transit of Venus, December 8, 1874, is the title of a small book which is well worth reading. The author, Rev. S. J. Perry, was one of the scientific men who volunteered to go out to that Land of Desolation for the advantage of astronomy, and indeed of physical science generally. A man must be thoroughly in earnest when, in order to make observations of a transit, he sails away to a lonely island three thousand miles from human habitation, through a region of mist and storm, where, during three weeks of every month, the wind blows a gale, and the greatest waves in the world are upheaved. All this, and the severity of the labour in a wild climate, and passages of daily life, and touches of adventure, are well described.

A few sheep, carried from the Cape of Good Hope, were turned loose on the island, and liked liberty so well, that, when they were 'wanted,' they took to the hill-tops, and could only be captured by stalking. A small number escaped, and if, as Father Perry says, 'they are not dead of cold, they may still be enjoying their freedom on the Kerguelen hills.' Small colonies of rabbits were established in boxes in different parts of the island, in the hope that they would increase and multiply. The botany of the island was allotted to a young curate of the Church of England, who collected plants with praiseworthy activity, with addition of specimens of natural history.

By way of turning the South Kensington Exhibition of scientific apparatus to profitable uses, a series of conferences has been held in the various branches of physical science represented by the instruments. Natives and foreigners have met at these conferences, and we may assume that one of the effects will be to establish a community of scientific opinion among those who cultivate science throughout Europe. To the cultivated observer there is something especially instructive in the contents of the long ranges of glass cases; and the thought will perhaps arise that past generations were not so benighted as we fondly imagine them to have been. Galileo's telescope, for example, is found to be a good telescope, and the favoured few who have looked through it down the long galleries of the Exhibition declare that objects are seen with surprising distinctness. Another thought is suggested by observation of the apparatus with which Faraday and other philosophers worked—namely, that genius achieves its object with the very simplest appliances. Given the genius, one may be trusted to make his research even without endowment; and he will outstrip those who put their trust in costly and complicated apparatus. Other famous names are similarly illustrated; and any one who walks through the Exhibition, catalogue in hand, remembering how much lies beneath the surface, will not fail to carry away an impression that may animate him for the rest of his life.

A Society of Public Analysts has been formed to promote and maintain the efficiency of the laws relating to adulteration—to secure the appointment of competent public analysts—to improve the processes for the detection and quantitative estimation of adulterations, and to secure uniformity in the statement of the results, by holding periodical meetings for the reading and discussion of original papers on chemical and microscopical analysis, especially with reference to the detection

of adulteration. The new Society shew that they are in earnest by publishing the first volume of their *Proceedings*, containing reports of meetings and of the papers read, with statements of legal cases and results. Among others there are papers on the detection of alum in bread—on milk—on natural constituents of wine—on butter, pepper, tea, and other articles, all connected with the general question. A Society willing to do so much for the advantage of the public generally surely deserves to prosper, and find members in every town in the realm.

Dr Stokes, Regius Professor of Physic in the University of Dublin, in the course of a lecture on Sanitary Science in Ireland, stated that there are in Dublin a thousand houses unfit for human beings to live in. 'I believe,' he continued, 'that this estimate is far below the mark. The Reports of our nuisance inspectors remind me of early days spent in visiting the poor in the Liberties of Dublin, since which time decay and destitution have been doing their work fourfold in all the poorer parts of our city. The marks of physical degradation in the inhabitants are sickening to look at: the ill-developed frame, the pallid and hollow cheek, the sunken eye, all tell of a population through which endemic and epidemic disease run riot.' As regards the origin and propagation of contagious diseases, Dr Stokes is of opinion that we know less than is commonly supposed; and he says: 'I believe that we must mainly trust for disinfection to cleanliness in the widest acceptance of the word.' The lecture is published in the *Journal* of the Royal Dublin Society, along with papers 'On the Discrimination of Good Water and Wholesome Food'—'On the Geographical Distribution of Disease'—'On the Prevention of Artisans' Diseases'—and other subjects; all of which may be read with advantage by any one interested in sanitary science.

From a paper read at a meeting of the Institution of Civil Engineers, we learn that the breakwater at Holyhead is seven thousand eight hundred and sixty feet long, and that it shelters a harbour comprising four hundred acres of deep water. The base of the breakwater was formed by dropping into the sea lumps of stone of all sizes, the refuse of the neighbouring quarries, until a mound arose broad and solid enough to serve as foundation for the masonry of the superstructure. The depth of water varies from forty to fifty-five feet; hence it is not surprising that seven million tons of stone were required for the whole work. The dropping was carried on from railway trucks running on timber-stages, built temporarily in the sea; and the daily quantity thrown down was about four thousand tons. The cost of the breakwater was one million two hundred and eighty-five thousand pounds.

A good work has been done at the mouth of Carlingford Lough, in Ireland, by dredging a navigable channel through the bar, and thus giving access to the twelve hundred acres of safe anchorage inside. The bar was composed of blue clay and boulders, some of them four tons weight. These were raised by chains and a crane; but stones of thirty hundredweight could be lifted by the dredge. The maximum weight raised in a single day was four thousand tons.

The subject of another paper read at the same place was the Pneumatic Transmission of Tele-

grams. The length of the pneumatic or air tubes in London is nearly eighteen miles. There are five tubes in Manchester, four in Liverpool, three in Dublin, three in Birmingham, and one in Glasgow. Small tubes can be worked more economically than large ones; a blast costs less than a vacuum; and it is found that lead tubes are more suitable for the work, and more durable than iron. The 'carriers' in which the bundles of telegrams are despatched are cylindrical boxes of gutta-percha covered with shrunk druggat, and their weight is less than three ounces.

A curious fact was related at a meeting of the Institution of Mechanical Engineers—namely, that a blasting-furnace in which a rich quality of iron has been smelted for some time continues to produce an equally good quality for a few days after the 'burden' has been changed; that is, after inferior ore has been put into the furnace. The explanation appears to be, that during the first smelting the furnace becomes saturated with carbon, which has a beneficial though temporary effect on the subsequent charge.

Another fact is, that in some of the saw-mills in the United States, circular saws are used with loose teeth, which can be taken out to be sharpened. Holes or recesses are drilled in the edge of the saw disc; the shank of each tooth is made with a dovetail which, when put into the hole, is turned round and thereby secured in its place. It is obvious that, if a few sets of teeth are kept always ready, the blunt ones may be taken out and the sharp ones put in with but little loss of time.

An account of another curious fact is published in a recent number of the *American Journal of Science*. 'Several years ago,' remarks the writer, 'after spending a portion of the day in experimenting with phosphuretted hydrogen, prepared from phosphorus and solution of potash, on retiring to bed I found my body quite luminous, with a glow like that of phosphorus when exposed to the air. Either some of the gas having escaped combustion, or the product of its burning, must have been absorbed into the system, and the phosphorus afterwards separated at the surface have there undergone slow combustion. I was conscious of no feeling that could be attributed to it, nor was my health apparently in any way affected by it.'

The Gas question has been discussed at the two ends of the kingdom: in London before the Institution of Civil Engineers by Mr Sugg, who stated that by his system one standard burner only was proposed for all qualities of gas. It can be easily gauged and verified. When used with sixteen-candle gas, it burns five cubic feet per hour with a three-inch flame, the light from which is equal to that given by sixteen sperm candles at six to the pound. At Newcastle-on-Tyne, Mr Pattinson, President of the Chemical Society, after describing his experiments with various burners, said: 'It thus appears that burners are in use in Newcastle which give a light equal to only three and three-quarter candles, with the same quantity and quality of gas as would give a light equal to seventeen and three-quarter candles when burned in a good argand, or twelve and a half candles in a good burner of its own class. From this we gather that if consumers will be careful to use proper burners, they will gain from three to five times the amount of light given by the improper burners. Besides

the saving in the cost of gas, there would be, as Mr Pattinson observes, 'the additional advantage of having the vitiation of the air in the room by sulphur compounds and carbonic acid from the burning gas reduced to the same extent.' He publishes his results, in the hope that public attention will be called to the question.

A fact which may be of use to workers in metal is mentioned in the *Journal* of the Chemical Society. A firm in Germany have invented a new grinding or polishing stone, which is prepared with emery, water-glass, and petroleum, and thus differs from those formerly manufactured of gum, shellac, and emery; a composition which, when it became warm, lost its grinding property. The new stones may be set spinning at the rate of from one to two thousand revolutions a minute without the same tendency to heat, and can therefore be used for the grinding of steel, if the surface be moistened from time to time with petroleum. The inventors of these stones are Van Baerle & Co. of Worms.

We learn from the same *Journal* that the pyrites dug from the mines near Meggen is treated in such an ingenious way that it yields a number of valuable products. In the first place it is the raw material for most of the sulphuric acid works in Germany; it yields six per cent. of zinc, and Glauber's salt in crystalline masses, and the refuse on exposure to moisture forms a beautiful red powder which can be advantageously used for polishing certain kinds of plate-glass.

The President of the Tyneside Naturalists' Field Club, in his last anniversary address, presented many interesting facts in natural history, among which the following may perhaps be thought worth attention by general readers. 'I have long thought,' said Mr Carr-Ellison, 'the heel-claw of the skylark and its congeners one of the clear demonstrations of beneficent design in organisation, to enable ground-roosting diurnal birds, of small specific gravity, to pass the night, not squatting, but crouching, and fronting the storm, without being either blown away or frozen to the ground. Neither the skylark nor any of its congeners could roost upon the ground, as they do, in winter, and in rainy windy weather, without the support of such a heel. They would be frozen to the ground; for they are diurnal birds, and sleep soundly at night. They do not keep shifting their position like the wakeful peewit and gold-plover; nor can they betake themselves to hedges, as the buntings do when the ground is wet. Hence I take the liberty of reading the lesson of the lark's heel in my own way, heedless of all that evolution has yet adduced, however interesting.'

At Oxford a project is on foot for the establishment of a School 'for the benefit of students who are natives of India, so that they may take the usual degrees in Arts after examination in the classical languages of their own country.' These languages are Sanscrit, Arabic, and Persian. They stand in the same relation to young Indian students as Latin and Greek to European students, and would form a real subject of examination *in literis humanioribus*. Mr Monier Williams, Professor of Sanscrit at Oxford, says of the proposed School: 'Its principal aim will be to draw England and India closer together, by promoting a reciprocity of thought and feeling between the two

countries, and a better knowledge of each other;' and he believes that it will 'partly effect this object by adapting itself to the needs of young Indians, who, as soon as an Indian School for degrees is established, will probably flock to our university.' This seems to be a project which ought to succeed.

Asiatic cholera is so well known to be such a terribly fatal disease, that any plan of treatment that gives promise of success must excite general interest. A method has lately been introduced by Surgeon-major A. R. Hall, of the Army Medical Department, which, it is hoped, will lessen the mortality caused by this fearful malady. It consists in putting *sedatives* under the skin, by means of a small syringe (hypodermic injection), instead of giving stimulants by the stomach. Surgeon-major Hall has served nearly twelve years in Bengal, and has suffered from the disease himself. In most accounts of the state of the patient in the cold stage, or collapse of cholera, the heart is described as being very weak, and the whole nervous system much exhausted. Stimulants have, therefore, almost always been administered; but experience has shewn that they do more harm than good. Surgeon-major Hall observed, in his own case, while his skin was blue and cold, and when he could not feel the pulse at his wrist, *that his heart was beating more forcibly than usual!* He therefore concluded, that the want of pulse at the wrist could not depend upon want of power in the heart. A study of the works of a distinguished physiologist, Dr Brown-Séquard, with some observations of his own, suggested the idea, that the whole nervous system is *intensely irritated*, instead of being exhausted; and that the heart and all the arteries in the body are in a state of spasmodic contraction. The muscular walls of the heart, therefore, work violently, and *squeeze* the cavities, so that the whole organ is smaller than it ought to be; but it cannot dilate as usual, and so cannot receive much blood to pump to the wrist. Surgeon-major Hall looks upon the *vomiting and purging* as of *secondary importance*, but directs special attention to the spasmodic condition of the heart and lungs. The frequent vomiting generally causes anything that is given by the mouth to be immediately rejected; so it occurred to him that as the nervous system appeared to want soothing instead of stimulating, powerful sedatives if put under the skin would prove beneficial. A solution of chloral hydrate (which has a very depressing action on the heart) was employed in twenty cases where the patients were either in collapse, or approaching it, and eighteen of these recovered. They were natives of Bengal. It is probable that, among Europeans, in severe cases, more powerful depressants may be required; and Surgeon-major Hall recommends the employment of solutions of Prussic acid, Calabar bean, bromide of potassium, and other true sedatives. Opium (which is not really a sedative, but a stimulating narcotic) and all alcoholic stimulants are to be avoided, and nothing given to the patient to drink, *in collapse*, except cold water, of which he may have as much as he likes. It is to be hoped that this sedative treatment may have an extended trial, and that before long we may have further favourable reports concerning it.

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